

DOCUMENT RESUME

ED 242 699

SP 024 102

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TITLE Teachers as Instructional Leaders.
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PUB DATE Apr 84
NOTE 31p.; Paper presented at the Annual Meeting of the
American Educational Research Association (New
Orleans, LA, April 23-27, 1984). For related
documents, see ED 238 788-789.
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference
Papers (150)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Elementary Secondary Education; *Instructional
Innovation; Interpersonal Competence; Leaders;
*Leadership Training; Peer Relationship; *Program
Implementation; *Research Utilization; *School
Cadres; Teacher Effectiveness; *Teacher Role
Maryland; *School Improvement Through Instructional
Process
IDENTIFIERS

ABSTRACT

This study examined the roles, functions, and effectiveness of a group of teachers who became Instructional Leaders (ILs), assuming major responsibility for assuring the implementation of a voluntary school improvement program within their respective schools. The program, called SITIP (School Improvement Through Instructional Process), and initiated by the Maryland State Department of Education, supported local education agencies in their adoption and implementation of four research-based instructional models: Active Teaching; Mastery Learning; Student Team Learning; and Teaching Variables. Data were collected for the IL study from local educators, students, and state technical assistants in the form of observational interviews, questionnaires, and document analysis. Factors or conditions related to the success of teachers as ILs are summarized in the form of recommendations. For a teacher to be successful as an IL: (1) implementation in the first year should be limited to the teacher's school; (2) ILs should be given sufficient time to plan and develop enough materials for a complete course before implementation begins; (3) the IL should be involved from the initial phases of planning and training; (4) IL expertise in the instructional model is necessary; (5) IL leadership style should be democratic; (6) the two key tasks of the IL are training and coaching other teachers in the innovation; and (7) administrative support is essential for IL success. (JD)

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TEACHERS AS INSTRUCTIONAL LEADERS (Summary)*

This study examined the roles, functions, and effectiveness of a group of teachers who, in addition to their traditional classroom roles, became instructional leaders (ILs), assuming major responsibility for assuring implementation of a voluntary school improvement program within their respective schools. This program, called SITIP (School Improvement Through Instructional Process), was initiated by the Maryland State Department of Education, which supported local education agencies (LEAs) in their adoption and implementation of four research-based instructional models: Active Teaching (AT), Mastery Learning (ML), Student Team Learning (STL), and Teaching Variables (TV).

Data were collected from local educators (principals, teachers, central office staff) students, and the state technical assistants assigned to provide support in the eight (8) projects in the seven (7) LEAs with teachers as instructional leaders. Four general methods of data collection were used: 1) observations of training and planning activities and at visits to schools; 2) interviews with key LEA and SEA staff; 3) questionnaires given to participants of critical events and to local implementers; and 4) document analysis of materials such as LEA proposals and data summaries of cognitive and affective measures of student impact.

Results of the study indicated several factors or conditions related to the success of teachers as instructional leaders. These factors/conditions are summarized here in the form of recommendations.

For a teacher to be successful as an IL:

- Implementation in the first year should be limited to the teacher's school, preferably in one or two grades in one subject area at the elementary level, with a team of teachers at the middle school level, or within a single department at the high school level.
- The teachers involved in the project should be given time to plan and develop enough materials for a complete course before implementation begins. It is most desirable for the innovation to be used for at least a full semester in a given subject for a given grade or class. This suggests that ILs work with other teachers on planning and development in blocks of time e.g., during the summer vacation. Also, teachers need common planning time to review and improve "pilot" version materials.
- In order to have a sense of ownership of the project and to develop the necessary expertise, the IL should be involved in the project from the initial phases of planning and training. Early and continuous participation helps foster the commitment and accountability which are characteristics of successful ILs.

* Paper presented by Jane Kenney and Jane Roberts (Research for Better Schools) at the annual meeting of the American Educational Research Association, New Orleans, April 1984.

- To manage the project within his or her own school, the IL does not need to have a position of authority (e.g., department head), but does need expertise in the model, and the principal's acknowledgement and support. However, if the IL is responsible for expanding the model to other sites, central office support is essential. The support from administrators should be democratic and programmatic rather than authoritarian and bureaucratic. The latter type of support leads to compliant instead of cooperative work efforts.
- The leadership style of an effective teacher leader is democratic, allowing other teachers to participate in decision-making, treating teachers with colleagueality and mutual respect, and sharing responsibility for project success. The major types of behaviors engaged in by successful ILs are initiating and piecing out tasks, rather than maintaining tasks assigned to them by administrators.
- The two key tasks performed by ILs are training and coaching other teachers implementing the innovation. ILs need credibility (expertise or a position of authority) and principal support to be successful trainers/coaches in their own school, and must also have central office support (e.g., acknowledgement, release time) to train/coach teachers at other schools within the district and in other LEAs.
- Administrative support for IL success includes: acknowledgement and approval of effort and accomplishments, logistical assistance to arrange for common planning time and materials, and carefully applied positive pressure (especially on teachers outside the IL's domain) to encourage participation. Administrators may also provide incentives such as arranging for ILs of several schools or districts to meet together and share experiences, or to present their projects to outside audiences.

Teachers can be effective ILs if the conditions mentioned above are present. Teachers expand their roles beyond the classroom, becoming involved in planning and decision-making, and increasing communication and coordination among school staff. These activities appeal to teachers and could be considered in assessment of professional growth.

Introduction

Traditionally, researchers and practitioners have focused on the classroom role of the teacher, studying such factors as teachers' knowledge of subject matter and their classroom management techniques (e.g., Brophy, 1979; Emmer & Evertson, 1981). Current concern about teacher quality also suggests that assessment and rewards are based on the teacher's performance in the classroom (e.g., Newcombe, 1983). However, research and practice in school improvement have found several non-classroom related factors to be important to the teacher's role. These factors include teacher involvement in planning, decision-making, and problem solving activities (e.g., Firestone, 1977; Loucks, 1982; Louis et al., 1981; Roberts et al., 1982), which should be legitimately recognized by administrative and supervisory staff.

This study examines the roles, functions, and effectiveness of a group of teachers who, in addition to their traditional classroom roles, became instructional leaders (ILs), assuming major responsibility for assuring implementation of a voluntary school improvement program within their respective schools.

This program, called SITIP (School Improvement Through Instructional Process), was initiated by the Maryland State Department of Education, which supported local education agencies (LEAs) in their adoption and implementation of four research-based instructional models: Active Teaching (AT); Mastery Learning (ML), Student Team Learning (STL); and Teaching Variables (TV).

While staff involved included teachers, school administrators and central office staff, in most of the 29 projects in the state, primary leadership responsibility was assumed by either central office or school administrators.

However, at eight projects a teacher or team of teachers assumed major responsibility for the project's success. In general, they provided information and support to other implementing teachers and/or had a great deal of influence on project decisions (e.g., extensive influence on the design and development of materials and procedures). These teachers are considered to be instructional leaders and are the subject of this paper.

Following a description of methods and measures used, operational factors are discussed, roles and accomplishments are reviewed, and conclusions presented.

Methods and Measures

This paper summarizes part of an evaluation study covering the first two and one-half years of the SITIP program.* This period ran from December 1980 to June 1983, with the first nine months consisting of training and preparation, followed by implementation which began in September or October 1981. The following research questions are addressed:

- o What are the roles and responsibilities of the ILs and how did they evolve?
- o What factors influenced the relative effectiveness of ILs?
- o How effective were the ILs in bringing about implementation of the instructional process in terms of local objectives specified in district plans and in terms of impact on students and teachers?

Four general methods of data collection were used: (1) observations of training and planning activities and at visits to schools; (2) interviews with key LEA and SEA staff; (3) questionnaires given to participants of critical

* Other reports relating to Maryland's school improvement program are listed in the bibliography.

events and to local implementers; and (4) document analysis of materials such as LEA proposals and data summaries of cognitive and affective measures of student impact.

Data were collected from local educators (principals, teachers, central office staff), students, and the state technical assistants assigned to provide support, related to eight (8) projects in seven (7) LEAs that had teachers as instructional leaders.*

Operational Factors Influencing the Roles, Responsibilities, and Effectiveness of the Instructional Leaders

This section describes five sets of factors that established the operational environment of the ILs: the instructional models, the implementation strategies, the scope of implementation, the relationship of the project to LEA priorities, participation in SEA planning and training activities, and the level of authority of the ILs within their school. These operational factors functioned as "inputs" to the projects implemented, influencing the role and effectiveness of the ILs. Table 1 presents the factors in operation in the fall of 1981, summarizing key elements of local plans. Each set of factors is described. Then the relationship of the factors to the IL role is discussed.

Nature and Complexity of the Instructional Models

Each LEA selected one or more of four instructional models (innovations). The nature and relative complexity** of each innovation is described.

* One LEA implemented two innovations in the same school using different teams of teachers.

** Complexity is defined as: knowledge -- amount of new information to be acquired; materials -- redesign and/or development of new materials; methods -- amount of change required in classroom and/or school; and organization -- degree of role change and administrative action required.

Table I

Initial Factors Influencing the Role of the Instructional Leader

Project ^a	Factors	Model	Strategy	Scope of Implementation				Relationship to LEA priorities	Participation in SEA Planning & Training Activities	Level of Authority of the ILs Year 1 and Year 2 ^{**}
				# of Schools	# of Teachers	Grades	# Subjects			
Allendale		ML	LS	1	3	9-12	1	low	P, T	1 department head (+ teaching)
Baldwin		ML	PD	1	40-45	10-12	15	very high	P, T	released teacher (no teaching, full time on project)
Burlington		ML	LS	1	3	3,4	1	low		Yr1: No IL--Central office responsible for project implementation Yr2: 2 teachers (+ release time for training)
Central 1		STL	LS	1	3	6-8	2	high	P, T	Yr1: 3 teachers Yr2: 1 teacher (+ release time for training)
Central 2		TV	LS	1	18	6-8	4	high	P, T	Yr1: 3 teachers (lead teacher) Yr2: 2 teachers (+ release time for training)
Franklin		TV	PD	1	12	7,8	4	none	P, T	Yr1: 2 teachers Yr2: 1 teacher
Garrison		AT	LS	1	7	9-12	4	low	P, T	Yr1: curriculum coordinating teacher Yr2: Central office took over responsibility for project implementation
Millersville		AT	CB	1	10	9-12	4	low	P, T	1 teacher (+ release time for training during year 2)

^a P = attended at least two planning activities

T = attended at least two training activities

** Yr1 = Fall 1981 to Spring 1982

Yr2 = Fall 1982 to Spring 1983

Model: AT=Active Teaching

ML=Mastery Learning

STL=Student Team Learning

TV=Teaching Variables

Strategy: LS=Lighthouse school

PD=Pilot district

CB=Capacity building

o Active Teaching (AT) is a system of direct instruction developed by Thomas Good and Douglas Grouws at the University of Missouri. AT consists of: (1) Pre-lesson development -- homework review, and mental exercises; (2) Lesson development -- prerequisite skills review, new concepts demonstrated, and student controlled practice; (3) Seatwork -- individual practice; (4) Homework; and (5) Review/maintenance -- weekly and end-of-unit reviews. Two out of the eight projects with ILs implemented AT.

AT is relatively simple requiring little new knowledge. Additional materials may need to be developed for homework, but few major changes are required in the classroom or school. No role changes or new administrative action are required, with the possible exception of an active policy about homework.

o Mastery Learning (ML), developed by Benjamin Bloom and James Block, combines curriculum alignment and diagnostic/prescriptive instruction with a philosophy that all students can succeed. Essential components are: (1) developing a scope and sequence of objectives; (2) providing appropriate instruction aligned with the objectives to be mastered; (3) testing the student's progress in mastering the objectives through the use of a formative evaluation measure; (4) providing students who have not achieved mastery with additional corrective work in the deficient areas specified by the formative test, and providing students who have achieved mastery with enrichment activities to reinforce and supplement learning; (5) testing final mastery of the objectives with a summative evaluation measure, and (6) recording student progress in terms of individual mastery of specific objectives. "Mastery" is usually defined as 80% of the objectives in a given unit of instruction. Three out of the eight projects with ILs implemented ML.

ML is fairly complex, requiring new knowledge in curriculum and assessment, analysis and development, and subsequent selection, redesign or development of appropriate materials. The way things are done changes in the classroom and the school since instruction becomes more structured, and record keeping and curriculum alignment make new demands on faculty. Administrative action is required to arrange for "planning time" for analysis and development, and to facilitate test scoring and record-keeping. Also, teachers' roles change somewhat since ML requires more than the usual effort in analysis and development of systematic diagnostic/prescriptive instruction.

o Student Team Learning (STL) techniques use peer tutoring and team competition to facilitate student learning. Student Team-Achievement Divisions (STAD) and Teams-Games-Tournaments (TGT) were developed by Robert Slavin and staff at the Johns Hopkins University. Jigsaw was started at the University of

Texas by Elliott Aronson who is currently at the University of California at Santa Cruz. The key factors of STL are peer interaction, cooperation, and competition. One out of the eight projects with ILs implemented STL.

STL requires knowledge of grouping procedures, appropriate changes in delivery of instruction, and methods of assessing and recording student achievement. Materials need to be purchased or developed to fit peer learning. Changes are required in classroom practice but few are required from a school perspective. No role or administrative changes are required although the principal's support is helpful in publicizing student successes.

- o Teaching Variables (TV) was developed by David Helms and staff at Research for Better Schools, Inc. (RBS). Two variables are addressed. The "content" variable encompasses two factors: (1) assessment of prior learning, and (2) alignment of curriculum objectives and classroom instruction to the testing instrument. The "time" variable improvement cycle involves: (1) measuring student engaged time (SET) via classroom observation, (2) comparing SET to research data in order to determine level of predicted achievement and opportunity for improvement, (3) reviewing and selecting research-based improvement strategies, (4) implementing strategies, and (5) evaluating the effectiveness of the strategies in improving SET via additional classroom observations. Two out of the eight projects with ILs implemented TV. Only one project implemented both the "time" and "content" variables.

TV is most complex if both variables are addressed. New knowledge is required relating to analysis and development for "content" (which is similar to Mastery Learning since it requires alignment of curriculum, instruction, and tests). For "time," participants need to know how to observe, code, and analyze students' "engagement rate," compare findings with given norms and/or desired results, then determine and implement improvement strategies. Extensive materials are used for analysis (provided to trainees by developers). Also, in order to ensure curriculum alignment (for the "content" variable) appropriate materials may need to be developed. At the school level, faculty meeting time is used to determine improvements, some of which may be school-wide. Since teachers are observed by their peers or school administrators, organization changes occur to facilitate scheduling. This dimension (organization) is made more complex since teachers change their role -- to become observers and to increase efforts in systematic diagnostic/prescriptive instructional improvement.

Implementation Strategies

The three types of implementation strategies used by the LEAs with teachers as ILs are described here:

- o The pilot/district strategy involves one or a few schools in the first year with commitment from central office to become actively involved in dissemination/implementation to many more schools in subsequent years. One ML project and one TV project with ILs used this type of strategy.
- q Capacity building is essentially a staff development approach which encourages voluntary implementation following training conducted by those first involved with SITIP. One AT project with an IL used this type of strategy.
- o The lighthouse school strategy focuses implementation of an innovation in a single school. One AT, two ML, one STL, and one TV project with ILs used this type of strategy.

Regardless of the strategy selected, during the first year of the program each of the eight projects began implementation of the model in a single school.

Scope of Implementation

Scope of implementation is summarized in Table 2, and involves the following dimensions: number of schools, teachers, grade levels, subject areas, and time spent.

- o Schools -- During the first year each project was in a single school. Only two projects remained in a single school during the second year of implementation, with the total number of schools increasing from eight to 23, 17 of which were secondary schools.
- o Teachers -- From year 1 to year 2, the number of teachers increased from 96 to 252; with between three and 40 involved in any single school during year one, and between 3 and 150 involved in any single district during year two of the project. All ILs and two or three "pilot" teachers from each site received fairly intensive training from the SEA and/or model developers during the first year of the project. Most other teachers were trained by ILs, with assistance from SEA staff in some cases.
- o Grades -- In the first year, four projects focused on secondary grade levels, three focused on middle school grade levels, and one focused on grades 3-4. Four projects involved additional grade levels in the second year.

Subject areas -- Mathematics, language arts/reading, science, and social studies were each used by six projects, with only two projects using a single subject. (Single subject focus increased classroom time for a given model with resulting evidence of impact on student achievement.) Diverse other subjects were included by five projects.

- o Time spent -- Two of the eight projects (both implementing ML) used the selected instructional model for a given subject and grade level for two full school years. Others each used their models for at least one unit of instruction. For TV, each participating teacher was "time-on-task" observed three times.

Table 2

Projects' Scope: Years One and Two

Projects	# Schools		# Teachers		# Grades		# Subjects	
	Yr.1	Yr.2	Yr.1	Yr.2	Yr.1	Yr.2	Yr.1	Yr.2
Allendale	1S	1S	3	3	4	3	1	1
Baldwin	1S	5S	40	150	3	6	15	15
Burlington	1E	3E	3	13	2	4	1	1
Central 1	1S 2E	1S	3	10	3	4	2	3+
Central 2	1S	3S	18	23	3	3	4	4+
Franklin	1S	1S	12	15	2	2	4	4
Garrison	1S	2S	7	11	4	3	4	4
Millersville	1S	4S 1E	10	27	4	9	4	4+
Totals	7S 1E	17S 6E	96	252				

Yr.1 = Fall 1981 to Spring 1982

Yr.2 = Fall 1982 to Spring 1983

S = Secondary

E = Elementary

Project Relationship to Local Priorities

While all LEAs hoped that involvement in SITIP would contribute to classroom effectiveness, in only one LEA was the model adopted (Mastery Learning) as a stated district priority. In another LEA, the principal's priority was to build a cohesive and effective staff team in a new school, and he used two SITIP models (Student Team Learning and Teaching Variables) to help achieve that goal. As implementation began (fall 1981) the five other projects were working outside local priorities. In the second year, as three of those projects demonstrated success, greater support was provided to the ILs. Success of a project within the IL's own school was not strongly influenced by the relationship to a district level priority, but was influenced by the extent to which the project was related to the principal's priorities. Successful expansion to other schools was only possible when central office support was given, and that occurred only when the SITIP project was awarded greater priority.

LEA Participation in SEA Planning and Training Activities

The SEA requested that each LEA send at least one representative from each role group (i.e., central office staff, school administrators, and teachers) to the six training and planning activities sponsored by the SEA, that individual representation would be sustained in order to maintain a sense of continuity, and to build a cross-hierarchical knowledge base and consensus about the model and how it was to be implemented. In each of the eight projects, cross-hierarchical teams attended SEA-sponsored events, and the teachers assigned as instructional leaders attended at least two training and two planning activities, with the exception of the ILs in one LEA who were not as heavily involved in planning during the first year of the project. Participation in initial planning and training activities gave the ILs a sense of

ownership in the project and built their expertise in the model. Their involvement and expertise made them eligible candidates for the role of instructional leader.

Level of Authority of the Instructional Leaders

In two of the projects the ILs had prior positions of authority within their schools. One IL was a department head who performed his leadership rôle in addition to teaching, while the other IL was a curriculum coordinating teacher who did not have classroom responsibilities.

In a third project, the IL had previously been a teacher in the pilot school but was released by central office from her classroom duties to coordinate the ML project full time in her own school, and to eventually disseminate the model to other schools in the district.

In the remaining five projects, leadership responsibilities evolved and were carried out in addition to regular classroom duties. ILs in four of these projects were given release time to conduct training during the second year of the project. The leadership rôle was legitimized primarily by the teachers' expertise and the effort and energy they invested.

Relationships of Operational Factors to the IL Role

ILs were involved with all four models and with three of the four implementation strategies used in the state. They all began in a single school, with various levels of LEA interest or priority. Participation in initial planning and training was high. Initial levels of authority varied.

The models' most important influence on ILs related to complexity: classroom-contained innovations required less management and coordination and were easier for ILs (as long as they were in a single school). ML and TV, requiring more out-of-class preparation and follow-through, stretched IL

management skills. However, ILs did manage complexity effectively if they had leadership experience and/or school administrators provided logistical support.

The most influential feature of the implementation strategies was the fact that they all began in a single school -- allowing ILs to get started in a familiar environment. When expansion was planned, ILs were not effective unless they had considerable support (either from central office or SEA staff).

In terms of scope, ILs were most effective if they worked intensively rather than broadly, with a few teachers rather than many, aiming for a step-by-step series of successes rather than a broad range. This area related to student achievement, with greater evidence of accomplishment when a model was used for a given grade and subject for a stretch of time (preferably a complete course). Broad implementation involved many teachers (increasing management complexity) but did not lead to significant participation of students.

Administrators' priorities influenced IL success in that when the project supported a principal's priority ILs could be sure of encouragement and logistical support in that school, and when the project supported a district priority (one case) its' authority increased. Principals or central office staff who considered the projects relatively unimportant increased the burden on ILs, whose expertise was not bolstered by legitimate authority to persuade other teachers to participate.

IL participation in initial planning and training was very important since it helped build their confidence and expertise and gave them credibility.

Levels of authority were less important than the leadership style employed. However, in the beginning, the three ILs who had "titles" other than "teacher" got activities underway more quickly and demonstrated greater confidence. Lack of legitimate authority meant that ILs either had to use democratic leadership skillfully or rely on administrative support. Even skillful ILs could not expand to other schools without central office support.

The Roles, Responsibilities, and Accomplishments of the Instructional Leaders

There were six key tasks undertaken by the ILs. There were also three key dimensions of the IL role that were found to have strong influence on the success of the ILs. In the following discussion the ILs are described in terms of these tasks and dimensions, and their accomplishments are reviewed.

Tasks Undertaken

There were six key tasks undertaken by the ILs: training, coaching, linking, developing, monitoring, and publicizing.

Training. The training provided by the ILs was similar to the training provided by state staff, which was in turn influenced by the Bruce Joyce model of effective training for maximum transfer of knowledge and skills. In general, training consisted of traditional workshops where the IL provided a knowledge base for the model, demonstration of the skills necessary for implementation of the model, and opportunities for participants to practice those skills and to obtain feedback on their performance. Quality materials were provided and participants were encouraged to participate actively. ILs trained four different kinds of audiences: teachers in their own school (6 projects), teachers in other schools within the district (5 projects),

teachers in other LEAs (2 projects), and teachers and administrators at state sponsored follow-up training events (3 projects). Every IL engaged in training at least one type of audience. During the first year of implementation, most of the training was limited to the teachers within the IL's school, whereas during year two many of the ILs were given release time to train teachers in other schools within the LEA. The ILs in two LEAs trained all four types of audiences.

Coaching. The Joyce model emphasizes the importance of coaching for effective staff development. Coaching consisted of individual assistance to teachers as they attempted to implement the model within their classrooms. All of the ILs provided assistance to teachers. However, the ILs in only two LEAs provided coaching on a systematic basis. In one of those LEAs, the IL was given full time responsibility by central office to coordinate and disseminate the ML project and therefore had the time to train teachers and provide systematic follow-up assistance. As a result of the success of ML during the first year of the project, the IL team from the second LEA was given one-half of a day per month release time to train and coach other teachers in their district. The remaining ILs provided assistance if requested, usually using their own "free" time.

Linking. In four projects the ILs were considered to be the linker or key contact for the project. These ILs were contacted by state staff, educators within the district and across the state, and others interested in the project, and were responsible for providing information about the project and coordinating meetings, visits, and training activities. In three of these projects, the ILs had legitimate authority, while the IL at the fourth site

had been given a great deal of autonomy from central office to manage the project. Administrators were the key contacts for communication/linking purposes at the other four projects with teachers as ILs.

Developing. The amount of time spent on developing materials was related to the model being implemented. Active Teaching and Teaching Variables (time) required little materials development while Mastery Learning, Student Team Learning, and Teaching Variables (content) required more effort in this area. At all three of the ML sites, the ILs assisted in materials development but in varying ways. One of the ML ILs worked along with his teacher team to develop materials for an entire year's course in one grade level/subject matter area at one school. He persuaded central office staff to use project money to pay the teacher team to develop the materials during the preceding summer so that implementation could begin immediately on a full time basis. The second ML IL supervised the materials development in her school making sure that what was developed complied with certain specifications set forth by herself and the principal. Teachers in a variety of subject areas developed materials for two or three units of instruction. The IL team at the third ML site provided guidance to teachers developing materials both at their school and across the district. The teachers implementing ML at this third site developed units for an entire course in one subject area. The IL team at the TV site implementing the content variable designed a form for teachers to record when each curriculum objective was taught and tested. During the first year of the project, the lead teacher computerized this record keeping system so that interested educators could look at the data without knowing the identities of the teachers. The ILs at the remaining four sites were not involved in materials development.

Monitoring. Monitoring, like materials development, is related to the model being implemented. Monitoring or observing teachers is an inherent part of the Teaching Variables model and in both TV sites, ILs monitored teachers. However, in the other three models, monitoring is not a requirement, but the ILs in three non-TV projects engaged in monitoring. All three of these ILs had legitimate authority so they had the credibility to monitor teachers. However, they used their authority in different ways which was reflected in their monitoring style. One "democratic" IL engaged in subtle monitoring for the purposes of helping his teacher team to implement the model more effectively. The other two ILs managed their projects with a more authoritarian leadership style, and monitored the teachers to insure that they were implementing the models according to strict specifications.

Publicizing. Another task engaged in by some of the ILs was publicizing their project and sharing their expertise outside their own school system. The ILs from three projects helped state staff train and assist other LEAs at state sponsored training activities. As a result of this exposure at training events, the IL team from one TV project helped other LEAs train their teachers to learn the complex coding system used to measure time-on-task. Another IL was asked by the state technical assistant to assist in a presentation on mastery learning given at the 1983 American Educational Research Association Conference in Montreal. The third IL has received requests from other LEAs for permission to visit his school and observe the teachers implementing ML. The other ILs discussed their projects at state sponsored training activities but did not actively share their expertise or widely publicize their projects outside their own school districts.

Dimensions of the Role

The dimensions of the IL role influencing success were: (1) power and influence, (2) level of support and influence over resources, and (3) accountability for project success.

Power and influence. Handy (1978, p. 142) defines sources of power, methods of influence, and the nature of response, and argues that the three are interrelated, e.g., "Participative management implies expert power sources; influence by persuasion, and response by internalization." This example (democratic) captures the use of power and influence by most ILs. However, in three cases ILs had legitimate "position power" in addition to expertise, and so could (and two did) use rules or tradition of authority, with compliance as a response (bureaucratic or authoritarian). In addition, at one site, ILs had no position power yet with the backing of central office functioned bureaucratically, using rules and persuasion to apply expertise. Project success* was related to how the ILs used their authority (i.e., democratic vs authoritarian). Democratic leadership led to more effective projects. Authoritarian leadership minimized participatory decision-making.

Relative involvement in decision-making was important. There were three patterns of involvement: teacher teams, cross hierarchical teams, and administrative teams. Three projects had teacher teams sharing in decision-making with the IL in charge. (The principal and central office staff were supportive but not directly involved.) In three other projects, the teachers were part of a cross-hierarchical team. Two sites had administrative teams in which the IL worked with school based administrators and central office staff.

* Project success was defined as achievement of LEA objectives as stated in their plans. See page 19 for further discussion.

to plan, and then guided teachers in implementation. All three patterns of involvement were successful, except in one case where administrative position power over-ruled IL expertise, minimizing real participatory decision-making.

Those ILs with legitimate authority were more likely to initiate activities, while those with less position power or interest were more likely to maintain the program. Projects were most successful when the IL was democratic and demonstrated either initiating or piecing out behaviors according to project needs as indicated by the abilities of the other staff involved in the project. Authoritarian leadership (used at three sites) resulted in a lack of implementer involvement and commitment, and problems with project continuity and growth.

Resources and support. IL influence over resources and level of support from administrators varied among the projects. In the majority of cases, central office staff controlled the resources. However, in two cases, the ILs had strong influence over resource allocations but used their influence in different ways. One IL used the money to buy release time which enabled the teacher team to focus efforts leading to high student and teacher impact. The other IL negotiated with administrators to use project money in other ways that resulted in diversity of effort with less evidence of classroom impact.

In three cases, administrative support in the first year was minimal, giving the ILs a high degree of autonomy which was used democratically to build moderately successful projects in each of the three schools. However, in the second year problems occurred in two cases due to over-reliance on a single individual. In one LEA, the IL left after the first year of implementation. In the second LEA, the IL who was a classroom teacher with no legitimate authority, had difficulty disseminating the model beyond his own school. In both cases, SEA staff had to assist central office staff in

expanding to other schools, and in encouraging project advocates in the original schools. In six of the eight cases, support of the project from administrators was programmatic. Programmatic support from central office led to project success except in two cases where programmatic support was coupled with bureaucratic control. Bureaucratic control led to compliance rather than cooperative support from teachers.

Accountability. Accountability for success (the various rewards and punishments) was supposed to be shared by the cross-hierarchical team, with primary responsibility assumed by the official "project director" (usually central office staff). In practice, the ILs took major responsibility for project success. While this degree of responsibility was not surprising for the three ILs with legitimate authority, it appeared to be a new experience for the others. Only in two cases did the sense of accountability fade in the second year -- where there had been minimal administrative support in the first year, and project plans required additional effort in the second year. In one of these two cases, where individual IL advocacy and accountability faded, the IL had high autonomy but insufficient power and influence to achieve second year objectives (and gradually withdrew to a sphere where he could maintain his responsibilities). In the other case, bureaucracy and relatively low success eroded the IL's acceptance of accountability for success.

Summary. Successful projects had ILs who treated fellow teachers with colleguality and mutual respect, and who received cooperative support rather than compliance. In one of the two cases where these conditions were not present, central office support was bureaucratic and the IL had an authoritarian leadership style coupled with legitimate authority. In the second case, the support from central office was also bureaucratic which resulted in

a bureaucratic, compliant leadership style from the IL, which in turn led to compliant rather than cooperative support from the teachers involved. It is apparent that the interactions between the dimensions of the IL role form complex sets of influences. Success was more likely when the IL used expertise to persuade others to "internalize" the project, sharing decisions and tasks democratically, accessing resources to buy shared planning/development time, accepting accountability for success, and benefiting from central office support that was neither bureaucratic nor so distant as to stretch IL autonomy into alienation.

Accomplishments

Accomplishments are examined in two areas: IL professional achievement, and project success.

Professional achievement. Each IL increased knowledge and skills through involvement in the projects, not only in terms of the model adopted but also in various "out-of-the-classroom" activities. In general, the quality of the IL activities in the six task areas was high. Training took the most IL time (across all projects) and was well-received. In comparison, monitoring was done to a lesser extent by ILs, and was not well-received when the IL had an authoritarian style or was functioning in an environment of bureaucratic compliance. All ILs valued the opportunity to interact with other educators, and were proud of their involvement in the projects.

Project success. The effectiveness of the projects was defined as the extent to which their district's stated objectives were met. Table 3 presents a list of the objectives specified by the eight projects, the number of projects which included each objective in their local plans and the number of projects which successfully accomplished each objective. As can be seen in

Table 3, "improving teacher quality" and "improving attitudes" were the two most popular local objectives, specified by all eight projects. Seven of the eight projects were able to accomplish these objectives to varying degrees.

In the one project where neither one of these objectives was accomplished, the IL functioned bureaucratically, focusing on the major objective which was to compile a list of instructional strategies that would increase time-on-task at the secondary level (the TV model was adapted to fit this purpose). This objective was not accomplished either because the central office director lost interest in the project during the second year but still maintained ultimate authority. As a result the teachers became uncertain as to the purpose and benefits of the project and the IL was able only to coordinate the time-on-task observations (data collection with little purpose).

Increasing student achievement was the next most popular objective, with seven projects specifying it in their local plans. Only four of the projects were able to provide data to show that this objective had been accomplished.

Table 3
Accomplishment of Objectives Specified in Local Plans

Objective	Planned	Accomplished
Teacher quality (knowledge and skill)	8	7
Teacher perception of self and others	8	7
Student achievement	7	4
Expansion	6	5
Staff development/capacity building	2	2
Team building and school recognition	2	2
Research project	1	0

These data included scores on standardized and teacher-made criterion referenced tests, and course grades. Evidence of student achievement was most impressive in those projects that used the model consistently across the entire school year with a high degree of fidelity. In the three projects that did not provide data on student achievement, teachers reported perceptions of increases in grades and/or test scores in those classes using the model.

Six projects hoped to expand implementation to other teachers and schools during year two. Five of the six projects did expand. Four of these five projects were lighthouse schools whose major criterion for expansion was project success. In the fifth project, district-wide implementation of the model was an LEA priority even before the SITIP program was introduced.

Staff development/capacity building was an objective in two projects. These projects were both successful in effectively orienting and training a large number of educators in the model. In one project, the IL was given full time responsibility for coordinating the project within the pilot school and the LEA. She trained a large number of educators both within her school and district and in other LEAs. She also designed a workshop which was approved by the SEA for inservice credit. In addition to in-state efforts, she presented the project at out-of-state conferences. In the other capacity building project the IL was a classroom teacher, managing the project in addition to classroom duties, which limited his ability to spread the project especially beyond the district's boundaries.

In two projects (both implemented within the same school but with different teams of teachers), team building and school recognition were project objectives in addition to teacher quality and attitudes and student achievement. When local plans were being made, the school was in its first year of operation. The principal elected to participate in the SITIP program

and to implement two models (Student Team Learning and Teaching Variables) for the purpose of enhancing teacher interaction and cooperation. In order to accomplish this purpose, teachers were selected to manage the project and were successful in bringing about teacher unity and school recognition, in addition to accomplishing the other project objectives.

In general, the projects with teachers as ILs were successful in accomplishing the majority of their project's objectives. Six projects had a high degree of success accomplishing all their objectives.* One project accomplished all but one of its objectives (moderate success). This objective was increased student achievement which often takes several years to accomplish especially when the model is not being used consistently throughout the year (which was the case in this project). One project had low success. Although this project accomplished two out of four objectives, the objectives were accomplished with only a small number of the teachers that were the most directly involved with the project.

Summary and Conclusions

This study has found several factors or conditions related to the success of teachers as instructional leaders of an innovative school improvement effort. These factors/conditions are summarized here in the form of recommendations.

For a teacher to be successful as an IL, implementation in the first year should be limited to the teacher's school, preferably in one or two grades in one subject area at the elementary level, with a team of teachers at the middle school level, or within a single department at the high school level. The teachers involved in the project should be given time to plan and develop

* In two of the six projects the accomplishment of increased student achievement was based on teachers' perceptions and not student test data.

enough materials for a complete course before implementation begins. It is most desirable for the innovation to be used for at least a full semester in a given subject for a given grade or class. This suggests that ILs work with other teachers on planning and development in blocks of time e.g., during the summer vacation. Also, teachers need common planning time to review and improve "pilot" version materials.

In order to have a sense of ownership of the project and to develop the necessary expertise, the IL should be involved in the project from the initial phases of planning and training. Early and continuous participation helps foster the commitment and accountability which are characteristics of successful ILs.

To manage the project within his or her own school, the IL does not need to have a position of authority (e.g., department head), but does need expertise in the model, and the principal's acknowledgement and support. However, if the IL is responsible for expanding the model to other sites, central office support is essential. The support from administrators should be democratic and programmatic rather than authoritarian and bureaucratic. The latter type of support leads to compliant instead of cooperative work efforts.

The leadership style of an effective teacher leader is democratic allowing other teachers to participate in decision-making, treating teachers with collegiality and mutual respect, and sharing responsibility for project success. The major types of behaviors engaged in by successful ILs are initiating and piecing out tasks rather than maintaining tasks assigned to them by administrators.

The two key tasks performed by ILs are training and coaching other teachers implementing the innovation. ILs need credibility (expertise or a position of authority) and principal support to be successful trainers/coaches.

in their own school, and must also have central office support (e.g., acknowledgement, release time) to train/coach teachers at other schools within the district and in other LEAs.

To a lesser degree, ILs also develop materials and monitor the projects -- tasks which are more directly influenced by the nature of the innovation (e.g., ML requires more materials development while TV requires more monitoring). In order to monitor effectively, the IL must have credibility and a "monitoring style" that is of an assistance rather than an evaluative nature.

Linking, which is also a task performed by teacher leaders, is related to the level of authority of the IL. Publicizing is related to the importance given to project expansion by central office and their willingness to give the ILs the time necessary to perform this task. However, in some cases enthusiastic ILs make the success of their projects known with or without administrative support.

The key characteristics of successful ILs are: expertise in and enthusiasm for the innovation, ability in democratic leadership and management of planned change, and energy and perseverance to ensure implementation without use of authority (position power). ILs appear to find rewards in project success, in "doing a good job," in involvement in another aspect of the profession (beyond direct student-teacher interaction), and in interacting with other teachers about instructional improvement.

Administrative support for IL success includes: acknowledgement and approval of effort and accomplishments, logistical assistance to arrange for common planning time and materials, and carefully applied positive pressure (especially on teachers outside the IL's domain) to encourage participation.

Administrators may also provide incentives such as arranging for ILs of several schools or districts to meet together and share experiences or to present their projects to outside audiences.

This study has looked at the broader role of the teacher as an instructional leader. Teachers can be effective ILs if certain kinds of conditions are present. The role of the teacher leader identified in the present study should be of interest to researchers involved in school improvement and planned change, and to LEA administrators at both district and school levels who are trying to find alternative ways of distributing workloads among their staff. This study might also suggest to educators involved in teacher quality issues that teacher assessment and rewards should be based not only on the teacher's role in the classroom but on additional activities such as involvement in planning, decision-making, training, and problem-solving. Allowing teachers to expand their roles beyond the classroom may be a way to improve teacher quality and to attract and retain qualified people in education.

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